

**Notice of Allowability**

Application No.

10/735,359

Applicant(s)

SKOOG ET AL.

Examiner

Jennifer K. Michener

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/12/2003.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ The drawings filed on 12 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 12/12/03&3/19/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-17 and 19-23, drawn to a method of repair coating, classified in class 427, subclass 142.
  - II. Claims 18 and 24, drawn to a coated product, classified in class 428, subclass 63.
  - III. Claims 25-28, drawn to a composition, classified in class 106, subclass 638.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as brushing the repair coating onto the substrate instead of spraying.
3. Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different

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process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in a materially different process such as a process of brushing the product onto the substrate instead of spraying or in a process of applying an original thermal barrier coating instead of as a repair coating.

4. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together and have different operations, functions, and effects. A repaired gas engine turbine component is unrelated to an air sprayable liquid composition.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and the search required for each of the Groups is not required for the other Groups, restriction for examination purposes as indicated is proper.

7. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

8. During a telephone conversation with Kurt Ehresman in June 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-17 and

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19-23. Claims 18 and 24-28 were withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Examiner's Amendment***

10. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for claim cancellation was given in a telephone interview with Kurt Ehresman on July 22, 2004.

The application has been amended as follows:

In the claims:

Claims 18-28 have been canceled.

In claim 3, a period, --., has been added after the second use of the term "nanometers" in line 2.

In claim 10, the term "claim 1" has been changed to --claim 8--.

In claim 13, the term "further" in line 3 has been deleted.

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In claim 15, line 2, before the word "particle", the word "a" has been changed to --the--.

In claim 15, line 4, before the word "particle", the word "a" has been changed to --the--.

In claim 16, line 2, before the word "particle", the word "a" has been changed to --the--.

In claim 16, line 4, before the word "particle", the word "a" has been changed to --the--.

### ***Allowable Subject Matter***

11. Claims 1-17 are allowed.

### ***Reasons for Allowance***

12. The following is an examiner's statement of reasons for allowance:

The closest prior art of record, Stowell et al. (6,413,578), teaches *in situ* repair of thermal barrier coatings using a mixture of ceramics, and the binder and solvent of the instant claims. However, Stowell fails to teach that the ceramic powder mixture is provided in the two distinct particles size ranges of Applicant and that a third ceramic present in the coating powder is a fumed ceramic of another particle size range. Such a coating is taught in the instant specification to have a smoother surface due to the packing of the differently-sized particles and the claimed thixotropic properties ("ability to flow when subjected to a mechanical stress and to remain in place when the mechanical stress is removed") due to the use of the "fumed" ceramic.

Skoog et al. (6,177,186) teaches the use of a ceramic in the two particle size ranges of Applicant as an alternative to traditional thermal barrier coatings, which provides for heat reflective properties on a high-temperature article. While a third ceramic may be

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used by Skoog '186, this ceramic is not taught to be "fumed". Nor is the coating of Skoog taught for use in repair of thermal barrier coatings. Skoog fails to teach the use of such a coating to repair local, spalled regions of a damaged thermal barrier coating. Skoog et al. (6,210,791) teaches the use of a ceramic coating to overlay a traditional thermal barrier coating to provide the substrate article with a diffuse reflective barrier coating. Skoog teaches the use of a ceramic mixture in two particle sizes and also a fumed silica. However, the particle size ranges of Skoog '791 do not meet the instantly claimed ranges. Additionally, Skoog's ceramic coating is taught as a uniform topcoat for traditional thermal barrier coatings and therefore does not teach the use of such a coating to repair local, spalled regions of a damaged thermal barrier coating.

In light of the above, it would not have been obvious for an ordinary artisan to use the particle size ranges of Skoog '186 and the fumed ceramic of Skoog '791 for the ceramics of Stowell et al. One of ordinary skill in the art would not have been motivated to use the particles size ranges and fumed ceramics useful in coating the components of the Skoog references with reflective layers in a method of repairing localized, spalled regions of thermal barrier coatings as in the method of Stowell.

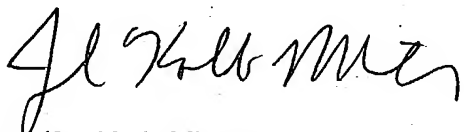
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer K. Michener whose telephone number is (571) 272-1424. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on 571-272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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July 23, 2004